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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/010,881

11/08/2001

Paul Barham

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11/30/2006

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT

PAPER NUMBER

2145

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,881

Applicant(s)

BARHAM ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/2006 has been entered.

Election/Restrictions

2. Claims 1-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/30/2006.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11, 19, 20, 22, 37, 39, and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The term "willingness to pay" in claims 11, 19, 20, 22, 37, 39, and 50 is a relative term which renders the claim indefinite. The term "willingness to pay" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is suggested that Applicant remove the term "willingness to pay" and replace it with "an assigned predetermined number associated with an operator of the computer system" to overcome this rejection. "Willingness to pay" cannot be measured by one of ordinary skill in the art.

Claim Rejections - 35 USC § 102

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 11-14 and 16-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakamiya et al. (US 5,682,477).

8. In regard to claim 11, Wakamiya disclosed:

obtaining price information corresponding to network load at the computer system, the price information being determined by actual network traffic relative to network capacity; (column 5, lines 55-65. The accounting compensation section checks available network resources to determine an accounting quantity) and

controlling a rate of transmitting data at a source on the network, the source generating the data as an original data free of containing any retransmitted content, the controlling based on the price information and a willingness to pay threshold, wherein the willingness to pay threshold corresponds to an assigned predetermined number associated with an operator of the computer system. (column 6, lines 9-12 shows the accounting quantity being calculated based on compensation data about the accounting quantity as well as resources availed quantity. Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

9. In regard to claim 12, Wakamiya disclosed:

obtaining price information includes receiving the price information from another computer system on the network. In Wakamiya, the accounting database and service management database are located separately from the source transmitting the data. This is receiving the price information from another computer system on the network. Wakamiya, column 5, lines 20-45.

10. In regard to claim 13, Wakamiya disclosed:

the other computer system on the network determines the price information by measuring the actual network traffic as an amount of the network capacity which can be served with a congestion below a congestion threshold. Wakamiya, column 6, lines 4-8

11. In regard to claim 14, Wakamiya disclosed:

the amount comprises a threshold value, and wherein the other computer system determines the price information by measuring the actual network traffic, and increasing a previous price if the actual network traffic relative to network capacity is greater than a threshold value, or decreasing the previous price if the actual network traffic relative to network capacity is less than the threshold value. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

12. In regard to claim 16, Wakamiya disclosed:

the other computer system broadcasts the price information. Wakamiya, column 6, lines 31-43

13. In regard to claim 17, Wakamiya disclosed:

the other computer system periodically updates the price information. Wakamiya, column 6, lines 39-43

14. In regard to claim 18, Wakamiya disclosed:

controlling a rate of transmitting data includes determining the rate based on the willingness threshold value divided by the price information. Wakamiya, column 6, lines 31-43

15. In regard to claim 19, Wakamiya disclosed:

controlling a rate of transmitting data includes, obtaining the value representative of the willingness to pay threshold for a selected application, and controlling the transmit rate for the selected application based on that willingness threshold value and the price information. Wakamiya, column 6, lines 44-47

16. In regard to claim 20, Wakamiya disclosed:

controlling a rate of transmitting data includes, obtaining the value representative of the willingness to pay threshold for each of a plurality of selected applications, and for each application, controlling the transmit rate based on the application's respective willingness threshold value and the price information. Wakamiya, column 6, lines 44-47

17. In regard to claim 21, Wakamiya disclosed:

at least one other application does not have its transmit rate controlled according to the price information. Wakamiya, column 6, lines 31-43

18. In regard to claim 22, Wakamiya disclosed:

at least one application has its transmit rate comprised of a fixed amount not controlled according to the price information, and a rate based on the price and the application's respective willingness to pay threshold. Wakamiya, column 6, lines 31-43

19. In regard to claim 23, Wakamiya disclosed:

the price information being determined is based on an amount of the network capacity being used by at least one application whose rate at least in part is not controlled according to price information. Wakamiya, column 6, lines 31-43

20. In regard to claim 24, Wakamiya disclosed:

a rate adjustment is smoothed based on the amount of the network capacity being used by at least one application whose rate at least in part is not controlled according to price information. Wakamiya, column 6, lines 31-43

21. In regard to claim 25, Wakamiya disclosed:

an observer mechanism that determines network demand; (column 5, lines 55-65 – resources availed quantity)

a pricing mechanism configured to determine a price based on the network demand and network capacity data, the pricing mechanism further configured to provide price information corresponding to the price to at least one device on the network; (column 5, lines 55-65) and

a rate control mechanism at a source of originally generated data packets free of retransmitted content that is configured to receive the price information and to control at least one

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transmit rate based on the received price information. Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

22. In regard to claim 26, Wakamiya disclosed:

the observer mechanism is incorporated into a computing device on the network.
(column 5, lines 55-65)

23. In regard to claim 27, Wakamiya disclosed:

the computing device comprises a router. Wakamiya, column 6, line 66 – column 7, line 2

24. In regard to claim 28, Wakamiya disclosed:

the computing device comprises a gateway. Wakamiya, column 9, line 66 – column 10, line 2

25. In regard to claim 29, Wakamiya disclosed:

the pricing mechanism is incorporated into the same computing device as the observer.
Wakamiya, column 6, lines 31-43

26. In regard to claim 30, Wakamiya disclosed:

the pricing mechanism provides price information by broadcasting the price information on the network. Wakamiya, column 9, line 66 – column 10, line 2

27. In regard to claim 31, Wakamiya disclosed:

the pricing mechanism provides the price information at periodic intervals. Wakamiya, column 6, lines 31-43

28. In regard to claim 32, Wakamiya disclosed:

the pricing mechanism determines price information by dividing a value representative of the network demand by the network capacity data. Wakamiya, column 6, lines 39-43

29. In regard to claim 33, Wakamiya disclosed:

the network capacity data comprises a fixed value. Wakamiya, column 9, lines 44-65

30. In regard to claim 34, Wakamiya disclosed:

the network capacity is not constant. Wakamiya, column 9, lines 44-65

31. In regard to claim 35, Wakamiya disclosed:

the value representative of the network demand comprises a number of bytes of network traffic per unit time. (Inherent to the discussion of resources availed. The resources availed in a quality of service system are rates of data transfer based upon bandwidth availability. The only way to measure this is a rate of data transfer, necessarily done in bytes per unit time.)

32. In regard to claim 36, Wakamiya disclosed:

the number of bytes includes packet overhead. This is inherent to Wakamiya, since Wakamiya measures bandwidth usage compared to total capacity and packet overhead is part of bandwidth usage.

33. In regard to claim 37, Wakamiya disclosed:

an application program, and wherein the rate control mechanism controls a transmit rate for the application based on a willingness to pay threshold value associated with the application program and the received price information, wherein the willingness to pay threshold corresponds to an assigned predetermined number associated with an operator of a computer system at the source. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

34. In regard to claim 38, Wakamiya disclosed:

at least one other application that does not have its transmit rate controlled by the rate control mechanism. Wakamiya, column 7, lines 15-25

35. In regard to claim 39, Wakamiya disclosed:

at least one application has its transmit rate comprised of a fixed amount not controlled according to the price information, and a rate based on the price and the application's respective willingness to pay threshold. Wakamiya, column 6, lines 31-43

36. In regard to claim 40, Wakamiya disclosed:

the price information being determined is based on an amount of the network capacity being used by at least one application whose rate at least in part is not controlled according to price information. Wakamiya, column 6, lines 31-43

37. In regard to claim 41, Wakamiya disclosed:

a rate adjustment is smoothed based on the amount of the network capacity being used by at least one application whose rate at least in part is not controlled according to price information. Wakamiya, column 7, lines 30-56

38. In regard to claim 42, Wakamiya disclosed:

the pricing mechanism determines the price information by comparing the network demand to a threshold value, and if the network demand achieves the threshold value, increasing a previous price, and if not, decreasing the previous price. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

39. In regard to claim 43, Wakamiya disclosed:

the rate control mechanism comprises protocol code implemented at the Internet Protocol (IP) layer. (Utilizing the IP layer to implement protocol code to control a rate of data transfer is inherent to the invention. The IP layer is the OSI Transport layer, where all data rate transmissions are determined in the OSI model.)

40. In regard to claim 45, Wakamiya disclosed:

receiving a plurality of packets transmitted on a network during a period of time;
Wakamiya, column 5, lines 32-65 measured network capacity.

determining a network demand value based on an accumulated size of the packets received during the period of time and a network capacity value; Accounting compensating and resources availed quantity, Wakamiya, column 5, line 33 – column 6, line 12.

determining a price value based on the network demand value relative to a threshold;
(column 5, lines 55-65)

providing the price value to a computing device operable to generate original packets free of retransmitted content on the network; (column 5, lines 55-65) and

at the computing device, controlling a rate of transmitting packets on the network based on the price. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

41. In regard to claim 46, Wakamiya disclosed:

receiving a plurality of packets includes operating a computing device in a mode that is intended to receive all packets transmitted on the network. Wakamiya, column 10, lines 28-41

42. In regard to claim 47, Wakamiya disclosed:

determining a network demand value comprises calculating a current percentage of the network capacity in use. (column 5, lines 55-65)

43. In regard to claim 48, Wakamiya disclosed:

determining a price value comprises increasing a previous price if the threshold is achieved, else decreasing the price. (column 5, line 66 – column 6, line 8)

44. In regard to claim 49, Wakamiya disclosed:

providing the price value comprises broadcasting price information on the network.

Wakamiya, column 9, line 66 – column 10, line 2

45. In regard to claim 50, Wakamiya disclosed:

controlling the rate of transmitting packets comprises, selecting an application program, obtaining a willingness threshold value associated with the application program, and controlling the rate based on the willingness threshold value and the price value, wherein the willingness threshold corresponds to an assigned predetermined number associated with an operator of the computing device. Wakamiya, column 6, lines 31-43

46. In regard to claim 51, Wakamiya disclosed:

acknowledging the receipt of the received packets and wherein controlling a rate of transmitting packets on the network comprises controlling a rate of acknowledging the receipt of packets by the computing device. Wakamiya, column 9, lines 51-60

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47. In regard to claim 52, Wakamiya disclosed:

receiving load information corresponding to network load at a destination of network packets, wherein the network load information is determined by network traffic, and at a source of originally generated network packets free of retransmitted content, controlling a rate of a flow of packets from the source to the destination based on the load information and a weight value associated with the flow. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

48. In regard to claim 53, Wakamiya disclosed:

controlling a rate of a flow of packets to the destination comprises controlling a rate of acknowledging packets received from the source. (Column 5, line 66 – column 6, line 9 selects a service implementing class which controls the quality of service or rate of transmitting data available to a source.)

Claim Rejections - 35 USC § 103

49. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

50. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakamiya.

51. In regard to claim 15, Wakamiya disclosed increasing and decreasing the accounting charges based upon network capacity. Wakamiya failed to disclose changing the cost based upon multiplying by a factor. However, one of ordinary skill in the art was well aware that multiplication could increase or decrease a number, and would find multiplication to increase or decrease a price to be obvious since it is a basic mathematical function commonly used in taxation. One would be motivated to multiply to allow for fixed changes in prices, such as in a tax bracketed basis for changing cost based upon income or usage.

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Conclusion

52. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ivanoff et al. US 5,517,622

Kidder et al. US 5,903,735

Mizutani et al. US 5,974,466


Vaid et al. US 6,047,322

Kilkki US 6,047,326

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Cardone
Supervisory Patent Examiner
Art Unit 2145

